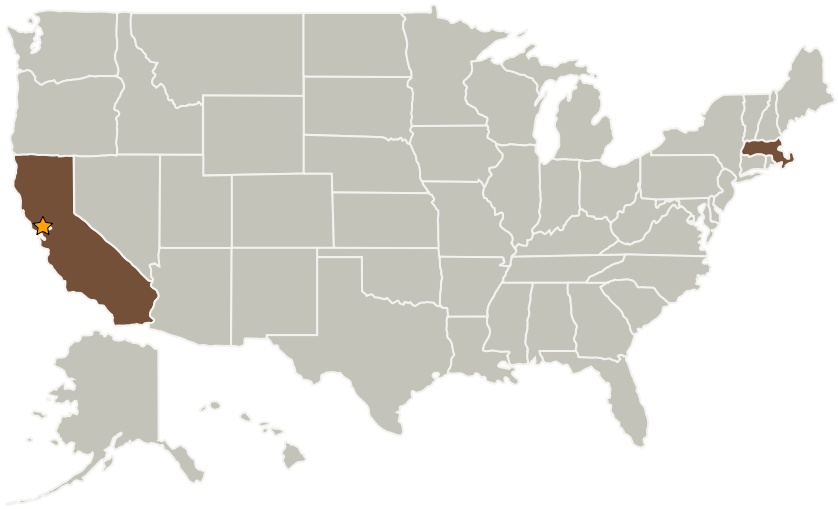
Aerospace Systems Monitor, Phase I

Completed Technology Project (2005 - 2006)

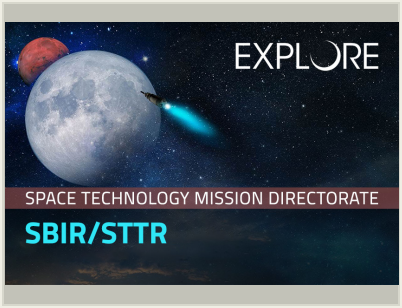
Project Introduction

This Phase I STTR project will demonstrate the Aerospace System Monitor (ASM). This technology transforms the power distribution network in a spacecraft or aircraft into a multiple-use service, providing not only power distribution but also a diagnostic monitoring capability based on observations of the way in which loads draw power from the distribution service. Careful measurements are made power transients and this data is used to assess system functioning and identify potential faults and failures. In Phase I, ASM measurements will be made on spacecraft components like attitude thruster control valves and a power switching array. An integrated circuit will be constructed with several components running on a single power supply to demonstrate analysis of several components simultaneously. In Phase II, ASM measurements will be made on actual spacecraft.

Primary U.S. Work Locations and Key Partners



Organizations Performing Work	Role	Type	Location
★Ames Research Center(ARC)	Lead Organization	NASA Center	Moffett Field, California
NEMOmetrics Corp.	Supporting Organization	Industry	Boston, Massachusetts



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Organizational Responsibility

Responsible Mission Directorate:

Space Technology Mission Directorate (STMD)

Lead Center / Facility:

Ames Research Center (ARC)

Responsible Program:

Small Business Innovation Research/Small Business Tech Transfer

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Primary U.S. Work Locations	
California	Massachusetts

Project Management

Program Director:

Jason L Kessler

Program Manager:

Carlos Torrez

Principal Investigator:

John F Rodriguez

Technology Areas

Primary:

- TX03 Aerospace Power and Energy Storage
  - TX03.3 Power Management and Distribution
    - TX03.3.1 Management and Control